

# CURRICULUM VITAE

April 2016

## PERSONAL:

NAME: **Menachem P. Weiss**

Citizen of: Israel, I.D. 030160618

Birth: 27th September 1938

Marital Status: Married to Ruth Weiss, two adult sons.

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## ACADEMIC DEGREES:

1960 B. Sc., Mechanical Engineering, Technion Israel Institute of Technology  
1964 M.Sc., Mechanical Engineering, Technion Israel Institute of Technology  
1973 D.Sc., Mechanical Engineering, Technion Israel Institute of Technology

## ACADEMIC APPOINTMENTS:

### Present:

1994 - Associate Professor, Faculty of Mechanical Engineering, Technion,

### Previous:

1991 - 1992 Visiting Scientist, Faculty of Mechanical Engineering, Technion.  
1990 - 1991 Visiting Research Fellow, Faculty of Mechanical Engineering,  
University College London (UCL).  
1983 - 1990 Scientist A+ (highest available), RAFAEL R & D Inst.  
1984 spring Visiting Research Scientist, Lawrence Berkeley Lab., Berkeley, USA.  
1972 - 1983 Scientist A, RAFAEL R & D Inst.  
1974 - 1976 Visiting Research Associate, Faculty of Mechanical Engineering,  
U.C. Berkeley  
1963 - 1972 Scientist C and B consequently, RAFAEL R & D Inst..  
1965 - 1991 Adjunct Lect. & Sen. Lect., Faculty of Mech. Engineering, Technion.

PROFESSIONAL EXPERIENCE:

- 2006-2016 Consulting to **BariPill Ltd.** A medical device development comp.
- 1998-2006 Consulting to many High-Tech companies in implementing Systematic Design methods and the original ICDM tools. (For example in 2005: Elcam Medical Ltd., Motorola Ltd., Kinetics Ltd.)
- 2004-2006 Member of the Engineering Design Review Committee, of the Israeli Atomic Energy Commission.
- 1997-2004 Chairman of the Committee on Safety, by appointment of the Chief Inspector, Ministry of Industry, Commerce and Labor.
- 1992-2000 Professional Inspector of Innovative Projects grants, for the Chief Scientist of the Ministry of Industry & Commerce
- 1992-1994 Consulting Engineer, cranes, elevators and materials handling equip.
- 1991-1992 Visitor in the University College, London. Fatigue of offshore structures.
- 1963-1991 **with RAFAEL**, Armament Development Authority, as detailed hereinafter:
- 1988-1990 In **Rafael Corporate Management** as Director of Procurement.  
Initiative to use Value Engineering and later QFD - Quality Function Deployment, in the Engineering Design process. In both disciplines, RAFAEL became a professional leader in Israel.
- 1984 Visiting Research Fellow at the **Lawrence Berkeley Laboratory**, Materials Department. Fatigue & Wear of metals.
- 1982-1987 Manager of the **Mechanics and Structures R&D Department** in the **Missiles Division**. Activities and responsibilities included: **Design of Missile Systems** and their Launchers; **Integration of multidisciplinary design**; Development of the Control Sections of missiles (electro-mechanical and electro-pneumatic third and fourth generation); Gas purification and cryogenic sensors and cryocoolers; **Various Mechatronic and Electro-optical systems**.
- 1976-1982 **Head of a Major Project** and a **Multidiscipline Department Manager**. Responsibilities included: Conceptual Design of major weapon systems; Embodiment and details design; Development and proof tests; Manufacturing, Delivery to the customer, and training .  
Establishing the **Reliability Group** , which turned to be, and still is, **the major Professional Reliability Group in Israel**.  
Initiating and leading the **CAD-CAM** activity in RAFAEL.
- 1963-1973 R&D Eng., R&D Branch Manager and **Design Department Manager**, with design and management responsibilities in the following subjects:  
Tooling for large rocket motors; Airborne launchers ; Free rotation meters; Electronic packaging; Special sensor design; Ground missile launchers; Original missiles stage separation systems; Dynamic balancing; Electro-machano-optical design; Reliability & Operations research of military technical systems;  
Tutoring and on the job training of numerous young engineers.

1960-1962 Military service as Lieutenant in the Israeli Air-Force - aircraft and ground equipment design and maintenance

### RESEARCH INTERESTS

- Fatigue & Fracture - new model for fatigue and fracture integration
- New tools and methods for the Conceptual Design of New Products - the ICDM method, Design Theory and Methodology,
- Systems Engineering – methods for Design and Synthesis,
- Steel wire ropes and Materials Handling,

### TEACHING EXPERIENCE:

- 2003-2006        **"Introduction to Design"** is a basic undergraduate course that includes the basic prescription methods for conceptual design. It is a compulsory course in certain orientations in the faculty,
- 1992-2006        **"Advanced Engineering Design - 1"**, combined graduate course, Technion and the Technion ME program of Systems Engineering. **Selected as the most valuable course in the SE program!**
- 1992–2005        **"Advanced Engineering Design - 2"**, graduate course, in the Faculty and in the Technion ME Program of Systems Engineering
- 1972-2006        "Machine Design - 1", including course coordination, Technion
- 1994-2006        "Design of a New Product – a project course", Technion, Mech. Eng.
- 1996-2006        One day workshop on: **"How to Design a New Product?"**, taught to industry (through Technion extension and others), and in many Industrial High-Tech companies,
- 2002–2006        One hour seminar on the ICDM method, to industrial companies,
- 1965-1999        Intermittently, " Design of Materials Handling Equipment", Technion
- 1980-1996        Courses for Certification of Inspectors for Elevators & Hoisting Machinery, Technion Extension in Tel-Aviv
- 1975                " Fatigue Failure Considerations in Design", U.C. Berkeley, Mech. Eng.
- 1978                "Introduction to Fracture Mechanics", RAFAEL, training school
- 1967-1990        Various Professional & Management courses in RAFAEL

### TECHNION ACTIVITIES:

- 1994–2006        Head of the Integrated Design Laboratory. Faculty of ME,
- 1999-2003        Member in the Technion Committee for Systems Engineering
- 1997-2003        Head of the Design section, Faculty of ME,
- 1997-2003        ME Faculty representative to Industry,
- 1994-1998        Coordinator of the Technion Design Club.

PUBLIC PROFESSIONAL ACTIVITIES:

- 2004- 2008           Member in the Engineering Board of IAEC,  
 1997-2004       Chairman of the Committee on Safety, by appointment of the Chief  
 Inspector of the Ministry of Industry, Commerce and Labor.  
 1993–1998       Professional Inspector of Innovative Projects grants, for the Chief Scientist  
 of the Ministry of Industry & Commerce  
 1987–1990       Director in RAFAEL Corporate Management.  
 1983–1998       Chairman and member of the certifying committee for Certified  
 Inspectors for elevators and cranes, Ministry of Labor  
 1983–1989       Member of the Central promotion committee for R&D top degrees A and A+.

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

**ASME** - American Society of Mechanical Engineers  
**The DESIGN Society** – International Society of Design Engineering  
**INCOSE** – The International Council on Systems engineering.  
**OIPEEC** - International Organization for the study of Endurance of Wire Ropes.

HONORS:

- 1975    The "**ISRAEL PRIZE FOR DEFENSE**", granted by the **President of ISRAEL**,  
 for exceptional scientific contribution in armament R&D.

GRADUATE STUDENTS:Completed Theses:

- 1997-   Cohen David,   M.Sc. Thesis: Adapting a combined model for crack propagation  
 estimate and reconstruction of S-N curves for different surface finishes.  
 1998-   Hirshberg Zvi,   M.Sc. Thesis: Extension of a new model for fatigue life  
 prediction of steel specimens in varying stress levels  
 1998–   Ben-Zeev Amira, M.Sc. Prof. G. Goldshmidt (Primary), Prof. M.P. Weiss (additional),  
 M.Sc. Thesis: "The design process and perception in solving problems, by the industrial  
 designer and the engineer",  
 2000-   Leikin Renald, for M.Sc., Thesis: "A measurement system for the exact position  
 of an elevator car".  
 2001-   Peles Sharon, for Ph. D., - Weiss M.P. and Prof J. Tirosh (co-advisers)  
 "Development of a multi-term relation for prediction of fatigue crack propagation  
 in metals"  
 2001-   Hari Amihud, for Ph.D., Weiss M.P. (Primary), Dr. A. Zonennshain (additional),  
 ICDM – Integrated, Customer Driven, Conceptual Design Method".  
 2001–   Cohen-Saguie Chagit, Weiss M.P. (Primary), Prof Rittel D. (additional) for M.Sc.  
 "Fatigue modeling of Weldox 700 steel specimen, welded by the pulsed MIG  
 method".  
 2003-   Yael Gilboa, for Ph.D., Weiss M. P and. Prof. A. Cohen (co-advisers),  
 " Algorithms for multi-criteria priorities of concepts in engineering design".

- 2004– Ashkenazy Ronen for Ph. D. - Weiss M.P. and Dr. Elata D. (co-advisers)  
"Fatigue of steel wires".
- 2005- Yariv Sade for MSc - "Development of a method for Industrial Concept Design
- 2005- Shmuel Franco for MSc - "Subject in Fracture and Fatigue of Metals"
- 2005- Michal Kakun A final project for ME in Industrial Design
- 2015- Erel Lavie for MSc – "Adaptation and extension of the unified model for fatigue of metals"

#### RESEARCH GRANTS:

- 1998–2000 Consorcia for Magnesium, Ministry of Commerce, 35,000 \$ each year, for 3 years, about **105,000 \$**. Weiss M.P. and Prof. Altus E.
- 2002–2006 From the joint fund of Vatat and the Atomic Energy commission, **310,000 \$** in 5 years, for the development of a **Knowledge Center for Methods and Tools in Systems Engineering**.
- 2003–2005 From the Committee of Ministry of Labor, **600,000 NIS**, for research in the field of safety of work with **steel wire ropes**, with Dr. D. Elata
- 2005- B. Gordon Systems Engineering fund, **17,000 \$**, Erez M., Arbel I. and Weiss M.P., The impact of Team training and Team innovation on the Conceptual Design of a New Product.
- 2005- B. Gordon Systems Engineering fund, **13,000 \$**, Weiss M.P. and Kraus J., Basic principles for System Embodiment Design.

#### SIGNIFICANT PROFESSIONAL PROJECTS:

- 2006 - Development of a unique capsule device against obesity.
- 1996-2005 Development of **ICDM** – the **I**ntegrated, **C**ustomer **D**riven, **C**onceptual **D**esign **M**ethod, a prescriptive method for the design of the concept of a new product or a new system. **It is successfully used in quite a few Israeli high-tech companies**. Workshops are provided for additional companies.
- 2000-2004 Development of a model and a test apparatus for the analysis, fatigue life and design of steel wire ropes. (**A breakthrough in the field**).
- 2000-2005 Consulting to **ClearCath Ltd.**, design of a unique, electro-mechanical solution to the problem of contamination of the human body with bacteria, via catheters and implants. Serves as a basis for a new start-up company.
- 1949-1999 Conceptual Design of **New Products** by teams of students, for companies like: **Elkam Inc.** Kibbutz Baram, - A device for automatic assembly of plastic parts,

**Scitex Inc.** Herzlia, - A cassette for unloading film from their current developing machines for the press industry.

**Israeli Air-Force**, - An improvement in the rescue hoist for Bell helicopters,

**KLA Inc.** Migdal Haemek, - Device for precise (20  $\mu\text{m}$ ) measurement of the distance between two points on a silicon wafer.

**Hay-Meidan Inc.** Carmiel, - A method and a device to imprint a logo or ornaments, on continuously cast prefabricated concrete plates.

**Elscont Inc.** - A new design of their memographic apparatus, for horizontal check.

**Visunic Inc.; Arad – Dahlia; Huliote Inc. etc.**

- 1963-1987 **Numerous significant projects** were performed in RAFAEL. All of them in development of new weapon systems, some of them major national systems, all are still classified. For one of the projects the ISRAEL Prize for Defence was awarded to Prof. Weiss in 1975.
- 1996–1998 Development of a **Fast Inclined Elevator System**, as a major faculty R&D project in progress with undergraduate students. An original and only existing solution.
- 1997-2004 Development of an **Automatic Car Parking Tower**. A unique solution of a fast, computerized, automatic handling system of passenger cars, for urban areas, by the name of **Car-O-Cell**. First system to operate in commercially **efficient rates of service** and use of small areas for parking.

## LIST OF PUBLICATIONS

**Menachem P. Weiss**

April 2016

### THESES:

- 1964 - M. Sc. Thesis "The influence of Wind Loads on Crane Structures in Israel", Faculty of Mech. Eng., Technion, Supervisor: Prof. Z. P. Ernst
- 1973 - D. Sc. Thesis "Calculation of crane beams for safe life", Faculty of Mech. Eng., Technion, Supervisor: Prof. Z.P. Ernst

### REFEREED JOURNAL PAPERS:

1. "Peak stress distribution in crane beams", Israel Journal of Technology, vol. 9, No. 4, pp. 355-362, 1971
2. "The use of classification zones for fatigue behavior in steels", Trans. ASME, J. of Engineering Materials and Technology, vol. 99, series H, No. 1, pp. 23-25, 1977
3. "Simulation and monitoring of loads in crane beams" ASTM STP 671, pp. 208-221, 1979

4. "Estimating fatigue cracks, from the onset of loading, in smooth AISI 4340 specimens, under cycling stresses", *Int. J. of Fatigue*, Vol. 14, No. 2, pp. 91-96, 1992
5. "The use of classification zones for fatigue behavior in steels - 2", *Trans. ASME, J. of Engineering Materials and Technology*, Vol 115, pp. 380-384, 1993
6. M.P. Wnuk and M.P. Weiss, "Modeling of low and high cycle fatigue in non-elastic solids", in *Advances in Fracture Resistance and Structural Integrity*, editors V.V. Panasyuk (et al.), 1994. pp. 233-240
7. "Classification of the fatigue domain, and prediction of damage with crack extension parameters", *Fatigue Fracture of Engng. Mater. & Struct.* 18(1), pp. 19-26, 1995
8. M.P. Weiss and Z. Hirshberg "Crack extension under variable loading, in the short and long cracks regime, using the general fatigue diagram", *Fatigue & Fracture of Engineering Materials & Structures*, Vol. 19, No. 2\3, pp. 241-249, 1996
9. "The SLOPELIFT – a New Fast Inclined Elevator System, induces no horizontal forces on its passengers", Lift report – *Journal for Technology of Elevators & Escalators*, Heft 3 (May/June '99), pp. 6-16, 1999 (same as # 22 in the conference papers list).
10. Cohen D. and Weiss M.P., "Calculation of S-N Curves for low alloy steels, based on Crack Length and an inclusive Crack Propagation Model", in "Engineering Against Fatigue", fully refereed, edited by Beynon J.H. et. al, 1999. A.A. Balkema Publishers. An ESIS publication. pp. 439-448
11. Ashkenazy R, Elata D. and Weiss M.P. "Analysing The Mechanical Behaviour of Non-Rotating Wire Rope", *Journal of the Mechanical Behaviour of Materials*, Vol.14, No. 6, 2003
12. Elata D. , Eshkenazy R and Weiss M.P. "The Mechanical Behaviour of a Wire Rope with an Independent Wire Rope Core", *International Journal of Solids and Structures*, 2004, Vol 41/5-6 pp 1157-1172
13. Ashkenazy R., Weiss M.P. and Elata D., "Torsion and bending stresses in wires of non-rotating tower crane ropes", *OIPEEC Periodical* No. 87, June 2004, pp. 59-81
14. Hari A., Kasser J. E., Weiss M.P., "How lessons learnt from creating requirements for complex systems led to the evolution of a modified version of QFD and a proven new meta-methodology", *Systems Engineering*, vol. 10, No. 1, 2007 pp. 45-63
15. Hari A. and Weiss M.P., "CFMA-an effective FMEA tool for analysis and selection of the concept for a new product", *Proc. Of the 1999 ASME Design Engineering*.
16. Weiss M.P, and Hari A., "Expansion of the Pahl & Beitz systematic method for conceptual design of a new product", *Procedia CIRP* 36 ( 2015 ) 254 – 260.
17. Weiss M.P. and Lavie E., "Fatigue of metals – what the designer needs", *Int. J. of Fatigue*, 84 (2016) pp. 80-90.

**PATENTS:**

2005 "Extending intrabody capsule", US 8,021,384, approved in 7 countries.  
 2016 3 patents pending.

**RESEARCH RAFAEL REPORTS AND CASE REPORTS:**

All in Hebrew

1. Miniature rotation meter analysis, RAFAEL rep. No. 67/006/PT, 1967
2. Development of dense packaging of spherical shapes, (\*) RAFAEL rep. No. 67/007/PT 1967
3. Empirical optimization of packaging of spherical shapes, (\*) RAFAEL. No. 67/060/PT, 1967
4. Analysis of the potential reliability of the PT system, (\*) RAFAEL No. 69/435/PT, 1969
5. Analysis of the dead weights for dynamic balancing of a free rotor, (\*) RAFAEL rep. No. 70/495/PT, by A. Rosenfeld and M.P. Weiss, 1970
6. Proposal for a XXXXXXXXXXXX for artillery rocket, (\*) RAFAEL rep. 70/A673/PT, by N. Levy and M. P. Weiss, 1970
7. Proposal for XXXXXXXXXXXX warheads for artillery rockets, (\*) RAFAEL rep. 71/673/PT, by J. Gertner, M.P. Weiss and N. Levy, 1971
8. Proposal for XXXXXXXXXXXX for artillery rockets, (\*) RAFAEL rep. 71/674/PT, by N. Levy and M.P. Weiss, 1971
9. Relaxation of the prestress and creep in flying conditions, of the center of gravity of P.T., (\*) Rafael rep. 71/1000/PT, by J.M. Lipshitz and M.P. Weiss, 1971
10. Development of a new stage separation mechanism in rockets. RAFAEL rep. No. 72/1070/PT, by I. Adato, J. Gertner, N. Malchin and M.P. Weiss, 1972
11. Analysis of M.K. warhead with various fusing, (\*) RAFAEL rep. No. 72/1116/PT, by J. Gilboa and M.P. Weiss, 1972
12. Artillery rocket Mark 3 - performance evaluation, (\*) RAFAEL rep. No. 74/19-TM-PM, by M. Weiss, M.P. Weiss and U. Rechav , 1974
13. - 39. **27 RAFAEL reports with classified titles and contents, (\*) 1975 - 19**
40. Selection of a CAD - CAM system for RAFAEL, rep. No. 84/38/013/P/DT, 1984
41. Comparison of CAD - CAM systems by a comprehensive benchmark, RAFAEL rep. 84/38/014/P/DT, by I. Greenfeld, D. Weinstein and M.P. Weiss, 1984
42. Critical Design-Review report of the Natlap, (\*) RAFAEL rep. No. 84/38/018/P/DT by M.P. Weiss, S. Shoshana, J. Shereshevsky and I. Greenfeld, 1984



43. The weight coefficient of a spherical pressure vessel, (\*) RAFAEL rep. 84/38/060/P/DT, by B. Meital, A. Arbel, I. Khaty and M.P. Weiss, 1984
44. Failure mechanism of a high pressure regulator, RAFAEL rep. 84/38/065//DT by A. Arbel, B. Meital and M.P. Weiss 1984
45. The strategy of project "**LITENING**", RAFAEL rep. No. 87/38/006/P/CT by I. Greenfeld and M.P. Weiss, 1987. Now a major & successful Rafael exported project.
- 46.- 59. **14 R & D Management reports**, 1968 - 1986
60. A problem of early failure in steel cables, in new installed fast elevators. For Nechushtan Elevator Corp. 1994.
61. Inquiry into an accidental drop of an expensive load from a mobile crane, a case under lawsuit. For M.I.R. Corp. in Beer Sheva, 1996
62. Inquiry into the safety of personnel & rescue hoisting on a helicopter winch in the IAF. For Rafael, 1996.
63. Inquiry into the adequacy of the initial conformance to standard inspection, of new elevators, by the Israeli Standard Institute. For the Ministry of Commerce, 1997

**CONFERENCE PAPERS:**

August 2008

1. Jaensch J. and Weiss M.P. Evaluation and similarity of systematic methods for the conceptual design of new products” 2008, ESDA'08 - 59394
2. Hari\_A., Kasser\_J. E. and Weiss M. P., " Lessons Learnt From the Applications of QFD to the Definition of Complex Systems" Proc. of the Annual International Symposium INCOSE, Orlando FL, USA, July 2006 (**Best paper Award**)
3. Kraus J., Weiss M.P. and Hari A., "Robustool – a tool for evaluating robustness in Conceptual Design", INCOSE IL05 Sept. 2005
4. Arbel I., Erez M., Weiss M.P. and Kroll E., "Effects of team composition and team processes on the Conceptual Design of New Products and Systems", Symposium of the Academy of Management, Hawaii, August 2005
5. Rog\_Y., Hari\_A. and Weiss\_M. P., "Application of the Risk & Time to Market Analysis (RTA) Method in Project Management – A Case Study" \_ Proceeding of System Engineering / Test and Evaluation Conference SETE 2004, Adelaide, Australia, November 8-10, 2004.
6. Hari A., Weiss M.P. and Zonnenshain A., "ICDM – An Integrated Methodology for the Conceptual Design of New Systems", \_ Proceeding of System Engineering / Test and Evaluation Conference SETE 2004, Adelaide, Australia, November 8-10, 2004.

7. Weiss M.P., Gilboa Y. and Cohen A., "Optimal synthesis of concepts for a new product, based on the morphological chart", Bi-Nat German-Israeli Symposium, Berlin 7-8.7.2005 pp. 181-190
8. Y. Gilboa, M. P. Weiss, and A. Cohen, "Synthesis of Optimal Combinations of Solution Principles from a Morphological Diagram", **Invited, AEDS 2004 Workshop**, 11– 12 November 2004, Pilsen - Czech Republic
9. Weiss M. P. and Gilboa Y., "More on Synthesis of Concepts as an Optimal Combination of Solution Principles" DESIGN 2004 Dubrovnik, May 18 - 21, 2004.
10. Eshkenazy R., Weiss MP, and Elata D. "Torsion and bending stresses in wires of non-rotating tower crane ropes", OIPEEC Technical Meetings Proc., pp 77-99, Lenzburg 2003, Switzerland
11. Hari A., and Weiss MP , " Analysis and Time To Market during the Conceptual Design of New Systems" , International Conference on Engineering Design, ICED`03, p. 217, Stockholm, August 2003
12. Weiss M.P., Hari A. and Zonnenshain A., "Design of the Concept of a New System, using ICDM - the Integrated, Customer Driven, Conceptual Design Method, Proceeding of the twelfth Annual International Symposium of the International Council On Systems Engineering (INCOSE), Las – Vegas, Nevada, USA, July 2002
13. Weiss MP, Finnie I, Peles S, Sagui C. and Youssefi K., "Exhibit of step by step fatigue crack propagation on the general Fatigue Diagram", in FATIGUE 2002, Proc. Eight Int. Fatigue Congress, Stockholm, Sweden, June 2002, pp. 2705-2713
14. Hari A., Herscovitz J., Zonnenshain A. and Weiss MP, "Application of ICDM for the Conceptual Design of a new product", International Design Conf. – Design 2002, Dubrovnik, May 2002
15. Hari A., Weiss MP., and Zonnenshain A. " Inclusive Conceptual Design Method – ICDM for better, Customer Driven Concepts of New Products", in the 45<sup>th</sup> AEQ Annual Congress, Istanbul, Turkey 18-21 September 2001
16. Gilboa Y., Weiss MP and Cohen A. "Conceptual design of preferred concepts, by evaluation and computerized combination of solution principles" International Conference on Engineering Design, ICED`01, Glasgow, August 21-23, 2001
17. Hari A., Weiss MP and Zonnenshain A., " Design Quality Metrics used as a quantitative tool for the Conceptual Design of a new product". International Conference on Engineering Design, ICED`01, Glasgow, August 21-23, 2001. **Best Paper award.**
18. Hari A. and Weis M.P., "Tool for analysis and selection of the concept for a new product", ASME Proceedings of DETC`99, Design Theory and Methodology, Sept. 1999, Las Vegas, Nevada, DTM-8756
19. Hari A. and Weiss M.P., " Failure mode analysis in the concept stage eliminates failures before they reach the customers", ICED`99 – International Conference on Engineering Design, Munich, August 1999, pp. 441-444.

20. Peles S. and Weiss M.P., "A modified two-term fatigue life prediction model for mean stresses in steel", in FATIGUE'99, Proceedings of the seventh International Fatigue Congress, Beijing, June 1999, pp. 857-864.
21. Hari A and Weiss M.P., "How to Eliminate Failures before they Reach the Customers", The twelfth International Conference of the Israel Society for Quality, Jerusalem, Dec.1998,
22. Weiss M.P., "The SLOPELIFT – a New Fast Inclined Elevator System, induces no horizontal forces on its passengers", in "Elevator Technology 9", edited by G.C. Barney, 1998. IAEE - The International Association of Elevator Engineers, pp. 281-290.
23. Weiss M.P. and Hari A., "Innovative teaching of Conceptual Engineering Design", The 27th Israel Conference on Mechanical Engineering, May 1998.
24. Hari A. and Weiss M.P. "ICDM - An Inclusive Method for the Design of Concepts that satisfy the Customers Needs", The Fourth National Conference of the Israeli Society for Quality, Jerusalem, November 1997, pp. 650-657
25. Gilboa Y. and Weiss M.P.: "Synthesis problems, in the design of a new product", The Fourth National Conference of the Israeli Society for Quality, Jerusalem, November 1997, pp. 666-671
26. Weiss M.P. and Hari A., "Problems in Concept Selection in Real Industrial Environment", The "11th International Conference on Engineering Design - ICED 97", August 1997, Tampere, Finland, pp.
27. Cohen D. and Weiss M.P., "Calculation of S-N Curves for low alloy steels, based on Crack Length and an inclusive Crack Propagation Model", in "Engineering Against Fatigue", an International ESIS Conference in Sheffield UK, March 1997.
28. Hari A., Weiss M.P. and Zonnenshain A., "A Critical Review of Methods for Conceptual Design in Concurrent Engineering Environment", The 11th International Conference of the Israel Society for Quality, Jerusalem, pp. 642-648, Nov. 19-21, 1996.
29. Hari A. and Weiss M.P., "ICDM - An Inclusive method for Customer-Driven Conceptual Design", The 2nd Annual Total Product Development Symposium, ASI Institute, pp. 721-747, on Nov. 6-8, 1996 at Cal. Poly Pomona, Ca. **Chosen as the Best Paper** in the conference.
30. Weiss M.P and Hari A., "How to Design New Original Products in a Methodical way?", The 26th Israeli Mech. Eng. Conf., Technion, Haifa, 5/1996
31. "Modeling Fatigue Damage in Terms of Crack Length, in the whole Fatigue and Fracture Domain, by use of the General Fatigue Diagram". FATIGUE 96, Berlin, The Sixth International Conf. on Fatigue 5/1996
32. Weill R.D. and Weiss M.P., "Implementation of the concept "Design for Manufacturing" in Mechanical Engineering Education", SME International Conference in Education in Manufacturing, San Diego, CA. 3/1996

33. Hari A. and Weiss M.P., "הרחבת מתודולוגיה לתכן קונספטואלי בהנדסה משולבת" "הכינוס הלאומי השלישי של האיגוד הישראלי לאיכות, ירושלים 11/1995
34. "The Fatigue Diagram as a new tool for analysis of Fatigue and Fracture problems in Design" FD`95 - Fatigue Design 95, Helsinki 9/95, A poster paper.
35. "A New Tool for Fatigue and Fracture Analysis in Design". ICED 95, Praha, International Conf. on Engineering Design, 8/1995
36. M.P. Weiss and Z. Hirshfeld, "Presentation of Crack Extension under Variable Loading, in the Short and Long Cracks Regime, using the General Fatigue Diagram", Conference on Cumulative Fatigue, ( **by invitation only**), Sheffield, England , 4/1995
37. M.P. Wnuk and M.P. Weiss, "Modeling of Low and High Cycle Fatigue in Nonelastic Solids". ICF8 - International Conf. on Fracture, Kiev 7/1993, same as # SP 1 on page 7.
38. "Fatigue Simulation in smooth parts including Initiation", FATIGUE 93, The Fifth International Conf. on Fatigue and Fatigue Thresholds, Montreal, 5/1993
39. "Classification of the Fatigue Domain and prediction of Damage with Crack Extension parameters" .EUROMECH 297, Lozari - Corsica, Fatigue Analysis in the concept of Mechanical Design, 8/1992
40. "A Unified Diagram for Fatigue and Fracture Mechanics Parameters and Prediction of Crack Propagation in Steel", 23rd Conf. on Mechanical Eng. , Technion, Haifa 1992
41. "בחירת מערכת תיב"מ למפעל עתיר ידע" הכנס החמישי לתיכון וייצור בעזרת מחשב, תל אביב, 1983
42. "Simulation and monitoring of loads in crane beams", ASTM symposium on Service Fatigue Loads Monitoring, Simulation and Analysis, Atlanta, STP 671, 1977 .
43. "Simulation of Bridge Crane Load Cycles and Life Estimation", ASME Design Engineering Conf., Boston, 15-DE-48, 5/1975
44. "Peak stress distribution in crane beams", 5th Israeli Conf. on Mechanical Engineering, 5-6/7/1971.